

CHAPTER THREE

FA-18 SUPPLEMENTARY COURSES

FA-18A/C/D SPECIFIC ACADEMIC SUPPORT PACKAGE

Course Objective: To provide the FA-18 aircrew with the academic ground training as required by MCO P3500.15 .

Length: 100 classroom hours: FA-18 A/C
125 classroom hours: FA-18 D

Notes:

1. The Academic Support Package (ASP) is developed by MAWTS-1 and is intended to be instructed by a WTI or other qualified squadron instructor. The Academic Syllabus shall be integrated into the Combat Ready (56 hours of academic instruction), the Combat Qualified (38 hours of academic instruction [FA-18 A/C] and 63 hours [FA-18 D]) and the Fully Combat Qualified (6 hours of academic instruction) stages of training. Classes delineated in paragraph 8 should be conducted annually for all aircrew (39 hours of academic instruction).
2. All classes listed below in the academic syllabus are available on either the secret or unclassified versions of the MAWTS-1 ASP or TOPGUN ASP.

Academic Syllabus:

1. The following syllabus supports the 200-level (Combat Ready) phase of training:
 - a. In direct support of the EW Stage, the following academic syllabus shall be completed:
 - (1) Self-Paced Readings:
 - (a) USMC FA-18 TACSOP, Ch. 7, *Surface to Air Countertactics*
 - (b) TOPGUN MANUAL, Ch. 10, *Defensive Countermeasures*
 - (c) AFTTP 3-1, Ch. 4, *AAA*
 - (d) AFTTP 3-1, Ch. 5, *Surface to Air Missiles*
 - (2) Lectures:
 - (a) **Prior to stage initiation:**
 1. FA-18 Surface to Air Countertactics
 - (3) Chalk Talks: N/A

- b. In direct support of the LAT Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) TAC MANUAL Vol II, Ch. 5, p. 5-7 thru 5-51; *Low Altitude Tactics*

(2) Lectures

(a) **Prior to stage initiation:**

- | | |
|-----------------|------------|
| 1. TACAIR LAT 1 | TACAIR ASP |
| 2. TACAIR LAT 2 | TACAIR ASP |
| 3. TACAIR LAT 3 | TACAIR ASP |
| 4. TACAIR LAT 4 | TACAIR ASP |

(3) Chalk Talks: N/A

- c. In direct support of the AA Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) USMC FA-18 TACSOP, Ch. 3, *Air-to-Air Employment*
- (b) TOPGUN MANUAL, Ch. 1, *Rule-of-Thumb*
- (c) TOPGUN MANUAL, Ch. 17; *Threat Radar Missiles*
- (d) TOPGUN MANUAL, Ch. 20; *FA-18 Shot Validation*
- (e) TOPGUN MANUAL, Ch. 21; *Threat IR Missiles*
- (f) AFTTP 3-1, Ch. 6, *Fighter Aircraft and Armament*

(2) Lectures:

(a) **Prior to stage initiation:**

- | | |
|--|---------------------|
| 1. BFM Basics and Offensive BFM | TOPGUN CLASSIFIED |
| 2. Defensive BFM | TOPGUN CLASSIFIED |
| 3. High Aspect BFM | TOPGUN CLASSIFIED |
| 4. MDTC Multi-plane Engaged
Maneuvering | MDTC CLASSIFIED ASP |

(3) Chalk Talks: N/A

- d. In direct support of the AS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) TOPGUN MANUAL, Ch. 22, *FLIR Systems*
- (b) TAC MANUAL VOL I, Pg 2-1 to 2-68

(2) Lectures:

(a) **Prior to stage initiation:**

- 1. FA-18 Fuzing

FA-18 CLASSIFIED ASP

(3) Chalk Talks: N/A

- e. In direct support of the CAS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) USMC FA-18 TACSOP, Ch. 4, *Offensive Air Support*
- (b) Joint Pub 3-09.3, *JTTP for Close Air Support*
- (c) MCWP 3-23.1, *Close Air Support*

(2) Lectures:

(a) **Prior to stage initiation:**

- 1. FA-18 CAS 1
- 2. FA-18 CAS 2

FA-18 CLASSIFIED ASP
FA-18 CLASSIFIED ASP

(3) Chalk Talks: N/A

- f. In direct support of the DAS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) USMC FA-18 TACSOP, Ch. 4, *Offensive Air Support*
- (b) TOPGUN MANUAL, Ch. 2, *Communications Brevity*
- (c) TOPGUN MANUAL, Ch. 29, *Laser Guided Bombs*

(2) Lectures:

(a) **Prior to stage initiation:**

- 1. TACAIR Armed Reconnaissance
- 2. FA-18 Air to Ground Employment

TACAIR ASP
FA-18 CLASSIFIED ASP

(3) Chalk Talks: N/A

- g. In general support of the Combat Ready Phase, the following academic syllabus should be completed:

(1) Lectures:

(a) TACAIR Non Radar SAMs & AAA Threat	TACAIR CLASSIFIED ASP
(b) TACAIR RF SAMs Threat	TACAIR CLASSIFIED ASP
(c) FA-18 EW Suite	FA-18 CLASSIFIED ASP
(d) MDTC FA-18 A/A Gunnery	MDTC CLASSIFIED ASP
(e) MDTC FA-18 AIM-9	MDTC CLASSIFIED ASP
(f) MDTC FA-18 AIM-7	MDTC CLASSIFIED ASP
(g) MDTC FA-18 AIM-120	MDTC CLASSIFIED ASP
(h) MDTC FA-18 Shot Validation	MDTC CLASSIFIED ASP
(i) MDTC FA-18 APG-65/73	MDTC CLASSIFIED ASP
(j) MDTC Threat Aircraft	MDTC CLASSIFIED ASP
(k) MDTC Threat Radar Missiles	MDTC CLASSIFIED ASP
(l) MDTC Threat IR Missiles	MDTC CLASSIFIED ASP
(m) FA-18 FLIR Employment	FA-18 CLASSIFIED ASP
(n) FA-18 Target Attack Planning	FA-18 CLASSIFIED ASP
(o) TACAIR Reactive Weaponeering	TACAIR CLASSIFIED ASP
(p) MAWTS-1 Urban CAS	GENERIC CLASSIFIED ASP
(q) TACAIR JMEMS	TACAIR CLASSIFIED ASP
(r) TACAIR Paveway II Weapons	TACAIR CLASSIFIED ASP
(s) FA-18 Cluster Munitions	FA-18 CLASSIFIED ASP
(t) FA-18 JDAM	FA-18 CLASSIFIED ASP
(u) FA-18 JSOW	FA-18 CLASSIFIED ASP

2. The following syllabus supports the 300-level (Combat Qualification) phase of training.

- a. In direct support of the AA Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) TOPGUN MANUAL, Ch. 11, *Threat EW*
- (b) TOPGUN MANUAL, Ch. 36, *Strike Fighter Missions*
- (c) TOPGUN MANUAL, Ch. 37, *Air-to-Air Mission Planning*
- (d) TOPGUN MANUAL, Ch. 40, *FA-18 Employment Part I*
- (e) TOPGUN MANUAL, Ch. 41, *FA-18 Employment Part II*
- (f) TOPGUN MANUAL, Ch. 44, *Adversary Instructor*
- (g) AFTTP 3-1, Ch. 9, *Adversary Air Employment, Operations and Training*
- (h) NSAWC Journal, Fall 1999, p. 40; *Grinder Application, A Focus on the Brief*

(2) Lectures:

(a) Prior to stage initiation:

- | | |
|------------------------------------|---------------------|
| 1. MDTC FA-18 Fighter Missions | MDTC CLASSIFIED ASP |
| 2. MDTC FA-18 Mission Employment 1 | MDTC CLASSIFIED ASP |
| 3. MDTC FA-18 Mission Employment 2 | MDTC CLASSIFIED ASP |
| 4. MDTC FA-18 Mission Employment 3 | MDTC CLASSIFIED ASP |

(3) Chalk Talks: N/A

- b. In direct support of the AS Stage, the following academic syllabus shall be completed:

(1) Self –Paced Readings:

(a) TAC MANUAL VOL I, Pg 1-113 to 1-122; 1-124 to 1-136; 3-1 to 3-88

(2) Lectures: N/A

- c. In direct support of the CAS Stage, the following academic syllabus shall be completed:

(1) Self –Paced Readings: N/A

(2) Lectures:

(a) Prior to stage completion:

- | | |
|------------------------|------------|
| 1. FAC(A) MACCS Part 1 | FAC(A) ASP |
| 2. FAC(A) MACCS Part 2 | FAC(A) ASP |

- d. In direct support of the DAS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) MAWTS-1 Strike Planning Guide
- (b) TOPGUN MANUAL, Ch. 27, *Air to Ground Employment*
- (c) TOPGUN MANUAL, Ch. 28, *Threat IADS*
- (d) NSAWC Journal, Spring 1998, p. 10; *Beating the IADS*
- (e) NSAWC Journal, Summer 1999, p. 33; *Desert Fox Bomb Hit Assessment*

(2) Lectures:

(a) **Prior to stage initiation:**

1. MDTC FA-18 Self-Escort Tactics

MDTC CLASSIFIED ASP

(3) Chalk Talks: N/A

e. In direct support of the ASWD Stage, the following academic syllabus shall be completed:

(1) Self-Paced Reading:

(a) TAC MANUAL VOL I, Pg 2-68 to 2-85

(b) TOPGUN MANUAL, Ch. 13, *IR Missiles*

(c) TOPGUN MANUAL, Ch. 14, *AIM-7M*

(d) TOPGUN MANUAL, Ch. 15, *AIM-120*

(2) Lectures: N/A

(3) Chalk Talks:

(a) Air to Air Gunnery pattern

f. In direct support of the SSWD Stage, the following academic syllabus shall be completed:

(1) Self-Paced Reading:

(a) TAC MANUAL VOL I, Pg 4-1 to 4-70

(2) Lectures:

(a) **Prior to stage initiation:**

1. FA-18 HARM Hardware and Software

FA-18 CLASSIFIED ASP

2. FA-18 HARM Modes of Operation
and Displays

FA-18 CLASSIFIED ASP

3. FA-18 AGM 65E Laser Maverick

FA-18 CLASSIFIED ASP

4. FA-18 AGM 65F IR Maverick

FA-18 CLASSIFIED ASP

5. TACAIR Paveway II Weapons

TACAIR CLASSIFIED ASP

(3) Chalk Talks: N/A

g. In direct support of the NS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Reading:

(a) TAC MANUAL VOL II, Ch. 6, *Night Fighter Tactics*

(2) Lectures:

(a) **Prior to stage initiation:**

1. FA-18 Night Systems Tactical Considerations

(b) **Prior to stage completion:** N/A

(3) Chalk Talks: N/A

h. In direct support of the CACC Stage (FA-18D), the following academic syllabus shall be completed:

(1) Self-Paced Readings:

(a) USMC FA-18 TACSOP, Ch. 5, *Combat Arms Coordination and Control*

(2) Lectures:

(a) **Prior to stage initiation:**

- | | |
|---|------------|
| 1. FAC(A) FA-18 Planning and Preparation | FAC(A) ASP |
| 2. FAC(A) FA-18 General Employment of FAC(A) & TAC(A) | FAC(A) ASP |
| 3. FAC(A) FA-18 FAC(A) Crew Coordination | FAC(A) ASP |
| 4. FAC(A) FA-18 Low Threat Employment | FAC(A) ASP |
| 5. FAC(A) FA-18 Elevated Threat Employment | FAC(A) ASP |
| 6. FAC(A) FA-18 Attack Helo Employment | FAC(A) ASP |
| 7. FAC(A) FA-18 Night Employment | FAC(A) ASP |
| 8. FAC(A) FA-18 TAC(A) Employment | FAC(A) ASP |

(b) **Prior to stage completion:**

- | | |
|---|------------|
| 1. FAC(A) Artillery Organization and Trends | FAC(A) ASP |
| 2. FAC(A) Call For Fire | FAC(A) ASP |

- | | |
|---|------------|
| 3. FAC(A) MACCS I | FAC(A) ASP |
| 4. FAC(A) MACCS II | FAC(A) ASP |
| 5. FAC(A) MAGTF FSCM | FAC(A) ASP |
| 6. FAC(A) Targeting & Fire Support Planning | FAC(A) ASP |
| 7. FAC(A) NSFS Capabilities | FAC(A) ASP |
| 8. FAC(A) NSFS Call For Fire | FAC(A) ASP |
| 9. FAC(A) TAGS | FAC(A) ASP |

(3) Chalk Talks: N/A

- i. In general support of the Combat Qualification Phase, the following academic syllabus should be completed:

- | | |
|-------------------------------|----------------------|
| (1) MDTC Threat Tactics | MDTC CLASSIFIED ASP |
| (2) MDTC Threat EW | MDTC CLASSIFIED ASP |
| (3) MDTC FA-18 CIT | MDTC CLASSIFIED ASP |
| (4) MDTC FA-18 Data Link | MDTC CLASSIFIED ASP |
| (5) MDTC Intercept Control | MDTC CLASSIFIED ASP |
| (6) MDTC PID / ROE | MDTC CLASSIFIED ASP |
| (7) FA-18 Paveway III Weapons | FA-18 CLASSIFIED ASP |
| (8) FA-18 HARM Tailoring | FA-18 CLASSIFIED ASP |
| (9) FA-18 HARM Planning | FA-18 CLASSIFIED ASP |
| (10) FA-18 HARM & TAMPS | FA-18 CLASSIFIED ASP |
| (11) FA-18 TALD | FA-18 CLASSIFIED ASP |

3. The following syllabus supports the 400-level (Full Combat Qualification) phase of training.

- a. In direct support of the DAS Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings:

- (a) NSAWC Journal, Summer 1997, p. 20; *Bosnia Update*
- (b) NSAWC Journal, Spring 1999, p. 16; *Knowing When to Say When*
- (c) NSAWC Journal, Summer 1999, p. 26; *FA-18 Lessons Learned from Operation Desert Fox*
- (d) NSAWC Journal, Spring 2000, p. 34; *Kosovo Engagement Zone Operations*

(2) Lectures:

(a) Prior to stage completion:

1. MAWTS-1 Assault Support Escort Tactics **GENERIC ASP**

(3) Chalk Talks: N/A

- b. In direct support of the SSWD Stage, the following academic syllabus shall be completed:

(1) Self-Paced Readings: N/A

(2) Lectures:

(a) Prior to stage completion:

1. SLAM ER **TOPGUN CLASSIFIED**

(3) Chalk Talks: N/A

- c. In general support of the Full Combat Qualification, the following academic syllabus should be completed: N/A

4. The following syllabus supports the Combat Wingman Qualification. It should be completed within six months of joining a squadron. This syllabus complements the Combat Ready and Combat Qualified Academic syllabi.

a. Self-Paced Readings:

- (1) USMC FA-18 TACSOP
- (2) TAC MANUAL Vol I, Chapter 5, page 5-7 thru 5-51; *Low Altitude Tactics*
- (3) TAC MANUAL Vol II, Chapter 6; *Night Fighter Tactics*
- (4) TOPGUN MANUAL, Ch. 2, *Communications Brevity*
- (5) TOPGUN MANUAL, Ch. 10, *Defensive Countermeasures*
- (6) TOPGUN MANUAL, Ch. 20, *FA-18 Shot Validation*
- (7) TOPGUN MANUAL, Ch. 22, *FLIR Systems*
- (8) TOPGUN MANUAL, Ch. 29, *Laser Guided Bombs*
- (9) TOPGUN MANUAL, Ch. 40, *FA-18 Employment Part I*
- (10) TOPGUN MANUAL, Ch. 41, *FA-18 Employment Part II*
- (11) Joint Pub 3-09.3; *JTTP for Close Air Support*
- (12) MCWP 3-23.1; *Close Air Support*
- (13) AFTTP 3-1, Chapter 4; *AAA*
- (14) AFTTP 3-1, Chapter 5; *Surface to Air Missiles*
- (15) AFTTP 3-1, Chapter 6; *Fighter Aircraft and Armament*
- (16) AFTTP 3-1, Chapter 9; *Adversary Air Employment, Operations and Training*

b. Lectures:

- (1) The following lectures may be completed in conjunction with the Combat Ready and Combat Qualification phases of training. Classes (1) to (12) are prerequisites to complete specific stages in the Combat Ready and Combat Qualification phase.

(a) **Prior to designation:**

1. FA-18 Surface to Air Countertactics	FA-18 CLASSIFIED ASP
2. TACAIR LAT 1-4	TACAIR ASP
3. BFM Basics and Offensive BFM	TOPGUN
4. Defensive BFM	TOPGUN
5. High Aspect BFM	TOPGUN
6. FA-18 Fuzing	FA-18 CLASSIFIED ASP
7. FA-18 CAS I&II	FA-18 CLASSIFIED ASP
8. FA-18 Air to Ground Employment	FA-18 CLASSIFIED ASP
9. FA-18 HARM Hardware and Software	FA-18 CLASSIFIED ASP
10. FA-18 HARM Modes of Operation & Displays	FA-18 CLASSIFIED ASP
11. FA-18 Laser / IR Maverick	FA-18 CLASSIFIED ASP
12. FA-18 Night Systems Tactical Considerations	FA-18 CLASSIFIED ASP
13. MDTC FA-18 AIM-9	MDTC CLASSIFIED ASP
14. MDTC FA-18 AIM-7	MDTC CLASSIFIED ASP
15. MDTC FA-18 AIM-120	MDTC CLASSIFIED ASP
16. MDTC FA-18 A/A Gunnery	MDTC CLASSIFIED ASP
17. MDTC FA-18 APG-65/73	MDTC CLASSIFIED ASP
18. TACAIR Paveway II Weapons	TACAIR CLASSIFIED ASP
19. FA-18 JSOW	FA-18 CLASSIFIED ASP
20. FA-18 JDAM	FA-18 CLASSIFIED ASP

c. Chalk Talks:

- (1) Wingman responsibilities
- (2) A/A timeline management
- (3) A/G timeline management
- (4) CAS system management
- (5) Intercept management

5. The following syllabus shall be completed in support of Section Leader training:

a. Self-Paced Readings:

- (1) USMC FA-18 TACSOP (review for Section Lead considerations)
- (2) TOPGUN MANUAL, Ch. 11, *Threat EW*

- (3) TOPGUN MANUAL, Ch. 17, *Threat Radar Missiles*
- (4) TOPGUN MANUAL, Ch. 21, *Threat IR Missiles*
- (5) TOPGUN MANUAL, Ch. 37, *Air-to-Air Mission Planning*
- (6) TOPGUN MANUAL, Ch. 40, *FA-18 Employment Part I*
- (7) TOPGUN MANUAL, Ch. 41, *FA-18 Employment Part II*
- (8) TOPGUN MANUAL, Ch. 44, *Adversary Instructor*

b. Lectures:

(1) **Prior to work-up Initiation:** N/A

(2) **Prior to designation:** The following lectures shall be completed within the six months prior to the certification flight.

- | | |
|---|-----------------------|
| (a) FA-18 Surface to Air Countertactics | FA-18 CLASSIFIED ASP |
| (b) FA-18 EW Suite | FA-18 CLASSIFIED ASP |
| (c) FA-18 Target Attack Planning | FA-18 CLASSIFIED ASP |
| (d) FA-18 CAS I | FA-18 CLASSIFIED ASP |
| (e) FA-18 CAS II | FA-18 CLASSIFIED ASP |
| (f) TACAIR JMEMS | TACAIR CLASSIFIED ASP |
| (g) MDTC FA-18 Fighter Missions | MDTC CLASSIFIED ASP |
| (h) MDTC FA-18 Mission Employment 1 | MDTC CLASSIFIED ASP |
| (i) MDTC FA-18 Mission Employment 2 | MDTC CLASSIFIED ASP |
| (j) MDTC FA-18 Mission Employment 3 | MDTC CLASSIFIED ASP |
| (k) MDTC Threat Tactics | MDTC CLASSIFIED ASP |
| (l) MDTC Threat Aircraft | MDTC CLASSIFIED ASP |
| (m) MDTC FA-18 Self Escort Tactics | MDTC CLASSIFIED ASP |
| (n) FA-18 HARM Tailoring | FA-18 CLASSIFIED ASP |
| (o) FA-18 HARM Planning | FA-18 CLASSIFIED ASP |

c. Chalk Talks:

- (1) A/A timeline construction
- (2) A/G timeline construction
- (3) ATACS / TA.R.G.E.T. / PFPS / PC Effects / PMPT
- (4) JDAM / JSOW Mission Planning
- (5) Section A/A targeting considerations
- (6) ATTP

6. The following syllabus shall be completed in support of Division Leader training:

a. Self-Paced Readings:

- (1) USMC FA-18 TACSOP (review for Division Lead considerations)
- (2) TOPGUN MANUAL, Ch. 27, *Air-to-Ground Employment*
- (3) TOPGUN MANUAL, Ch. 28, *Threat IADS*

- (4) TOPGUN MANUAL, Ch. 36, *Strike Fighter Missions*
- (5) NSAWC Journal, Spring 1998, p.10; *Beating the IADS*
- (6) NSAWC Journal, Summer 1999, p.33; *Desert Fox Bomb Hit Assessment*
- (7) NSAWC Journal, Fall 1999, p.40; *Grinder Application, A Focus on the Brief*

b. Lectures:

- (1) **Prior to designation:** The following lectures shall be completed within the six months prior to the certification flight.

- | | |
|---|----------------------|
| (a) FA-18 Surface to Air Countertactics | FA-18 CLASSIFIED ASP |
| (b) FA-18 Air to Ground Employment | FA-18 CLASSIFIED ASP |
| (c) MDTC FA-18 Self Escort Tactics | MDTC CLASSIFIED ASP |

c. Chalk Talks:

- (1) Division targeting / flow for OCA / DCA day & night
- (2) Division target area flow / de-confliction day & night
- (3) SEAD integration considerations

7. The following syllabus shall be completed in support of Mission Commander training:

a. Self-Paced Reading:

- (1) USMC FA-18 TACSOP
- (2) MAWTS-1 Strike Planning Guide
- (3) NSAWC Journal, Summer 1997, p.20; *Bosnia Update*
- (4) NSAWC Journal, Spring 1999, p.16; *Knowing When to Say When*
- (5) NSAWC Journal, Summer 1999, p.26; *FA-18 Lessons Learned from Operation Desert Fox*
- (6) NSAWC Journal, Spring 2000, p.34; *Kosovo Engagement Zone Operations*

b. Lectures: N/A

c. Chalk Talks:

- (1) Strike planning
- (2) Force concentration / Defense in depth considerations
- (3) Joint SEAD integration
- (4) Strike mission briefing
- (5) USAF aircraft capabilities overview

8. In general support of all stages of training, the following lectures should be presented to all aircrew annually:

- | | |
|---|-----------------------|
| a. FA-18 Surface to Air Countertactics | FA-18 CLASSIFIED ASP |
| b. TOPGUN BFM Basics and Offensive BFM | TOPGUN CLASSIFIED |
| c. TOPGUN Defensive BFM | TOPGUN CLASSIFIED |
| d. TOPGUN High Aspect BFM | TOPGUN CLASSIFIED |
| e. MDTC Multi-plane Engaged Maneuvering | MDTC CLASSIFIED ASP |
| f. FA-18 Fuzing | FA-18 CLASSIFIED ASP |
| g. FA-18 CAS 1 | FA-18 CLASSIFIED ASP |
| h. FA-18 CAS 2 | FA-18 CLASSIFIED ASP |
| i. TACAIR Armed Reconnaissance | TACAIR ASP |
| j. FA-18 Air to Ground Employment | FA-18 CLASSIFIED ASP |
| k. MDTC FA-18 Fighter Missions | MDTC CLASSIFIED ASP |
| l. MDTC FA-18 Mission Employment 1 | MDTC CLASSIFIED ASP |
| m. MDTC FA-18 Mission Employment 2 | MDTC CLASSIFIED ASP |
| n. MDTC FA-18 Mission Employment 3 | MDTC CLASSIFIED ASP |
| o. MDTC FA-18 Self-Escort Tactics | MDTC CLASSIFIED ASP |
| p. FA-18 HARM Hardware and Software | FA-18 CLASSIFIED ASP |
| q. FA-18 HARM Modes of Operation and Displays | FA-18 CLASSIFIED ASP |
| r. FA-18 AGM 65E Laser Maverick | FA-18 CLASSIFIED ASP |
| s. FA-18 AGM 65F IR Maverick | FA-18 CLASSIFIED ASP |
| t. FA-18 JDAM | FA-18 CLASSIFIED ASP |
| u. FA-18 JSOW | FA-18 CLASSIFIED ASP |
| v. TACAIR Paveway II Weapons | TACAIR CLASSIFIED ASP |

FA-18 LOW ALTITUDE TACTICS INSTRUCTOR (LATI) CERTIFICATION COURSE

Course Objective. To certify an FA-18 NA as an instructor capable of safely conducting ground and airborne instruction of the FA-18 low altitude tactics flight syllabus outlined in MCO P3500.15.

Length: IUT: 8 classroom hours, 1 simulator, and 1 sortie.
Cert: LATI exam and 4 sorties.

Notes:

1. The FA-18 LATI Course was developed by MAWTS-1. Upon certification by a FA-18 WTI who has completed the LATI standardization check flown during the WTI Course or with a MAWTS-1 Instructor, the LATI designation may be made at the discretion of the squadron Commanding Officer.
2. The LATI designation is a pilot qualification only. However, FA-18D aircrew should brief and utilize crew coordination in order to optimize their aircraft.

Prerequisites

1. LAT qualified and current in accordance with MCO P3500.14 and MCO P3500.15.
2. Designated section lead.
3. Selected by Commanding Officer.

IUT STAGE

IUT Academic Syllabus:

1. Self-Paced Reading:
 - a. FA-18 LATI Program Guide
 - b. NWP 55-5-F FA-18 TACMAN, Volume I, Chapter 5, p. 5-7 to 5-56, 5-155 to 5-175
 - c. AFTTP 3-1 Volume 2, Chapter 13
 - d. T&R Vol I, Ch. 5, p. 5-1 to 5-7, 5-9, 5-19 to 5-15; chap 6, p. 6-3
 - e. T&R Vol II, Ch. 3, p. 3-27 to 3-28, 3-42 to 3-43, 3-73 to 3-74
2. Lectures:
 - a. The PLATI must be capable of teaching LAT 1-4 and Surface to Air Countertactics, though these will not be given formally during the academic syllabus.

3. Chalk Talks:

- a. FA-18 Low Altitude Tactics Instructor Course
- b. FA-18 LATI Standardization notes

IUT Flight Syllabus:

- 1. A minimum of 1 simulator and 1 flight is required. Additional sorties can be flown based on the needs of the individual PLATI. Work up flights shall be evaluated by a squadron LATI or WTI.

LATI 508	Simulator	D
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Goal: Develop proficiency in briefing, performing, chasing basic LAT procedures from the WTT console, and debriefing.

Requirements:

- 1. Evaluated by any designated LATI.
- 2. Simulator will be demo-briefed by the WTI LATI. The brief should include a detailed discussion of LAT terminology and concepts, maneuver specifics and LAT Rules of Conduct (ROC) as if this were an actual flight.
 - a. Circuit 1. The PLATI shall fly and demonstrate proficiency in the following maneuvers at comfort level, with the LATI on the simulator console:
 - (a) Level turns
 - (b) Speed rush baseline demonstration
 - (c) Ridgeline crossings
 - (d) Break turns
 - (e) Minimum Altitude Capable (MAC)
 - (f) The LATI will demonstrate the flight environment assessment, proper flight control for all maneuvers.
 - (2) Circuit 2. The PLATI shall fly and demonstrate proficiency in advanced maneuvers with the LATI on the simulator console:
 - (a) 50% dive recovery to comfort level
 - (b) Straight ahead oblique jink (SOJ)
 - (c) Turning oblique jink (TOJ)
 - (d) Reverse oblique jink (ROJ)
 - (e) Vertical jink (VJ)
 - (f) Threat reaction drills
 - (g) Single ship SCAT and low altitude SAM weave

- (h) The LATI will demonstrate the flight environment assessment and proper flight control for all maneuvers.
- (3) Circuit 3. The LATI will perform all circuit 1 maneuvers. The PLATI shall execute chase procedures from the simulator console.
- (4) Circuit 4. The LATI will perform all circuit 2 maneuvers. The PLATI shall execute chase procedures from the simulator console.

LATI 509

(2) FA-18s

D

Goal: Develop proficiency in briefing, performing and chasing advanced LAT maneuvers.

Requirements:

1. Evaluated by any designated LATI
 - a. T&R LAT-509
 - b. Flight briefed and led by the PLATI. The brief should include a detailed discussion of LAT terminology and concepts, maneuver specifics and LAT Rules of Conduct (ROC).
- (1) Circuit 1. The PLATI shall fly and demonstrate proficiency in the following maneuvers at comfort level, chased by a LATI on an approved course:
 - (a) Level turns
 - (b) Speed rush baseline demonstration
 - (c) Ridgeline crossings
 - (d) Break turns
 - (e) Minimum Altitude Capable (MAC). Currently prohibited without waiver MAC without a waiver from HQMC.
 - (f) The LATI will demonstrate the flight environment assessment, proper flight control and chase position for all maneuvers.
- (2) Circuit 2. The LATI will perform all circuit 1 maneuvers. The PLATI shall chase refining chase position, error analysis, and flight control.
- (3) Circuit 3. The PLATI shall lead a section LAT circuit performing the following maneuvers:
 - (a) Section turns (called and uncalled)
 - (b) Ridgeline crossings
 - (c) Section target attack

CERTIFICATION STAGE

Certification Academic Syllabus:

1. Written Exam:
 - a. Completed prior to LATI-3 and administered by a WTI LATI.

Certification Flight Syllabus:

1. This phase consists of a minimum of 2 flights which **shall be evaluated by a MAWTS-1 Instructor or squadron WTI who has completed the LAT standardization check** flown during the WTI course.
2. Upon successful completion of the certification syllabus, designation as a LATI is the prerogative of the squadron Commanding Officer.

LATI 510 E (2) FA-18s D

Goal. Demonstrate proficiency in briefing, executing and chasing a tactical LAT circuit.

Requirements:

1. Evaluated by a MAWTS-1 instructor or a squadron WTI who has completed the MAWTS-1 standardization check flight.
2. Flight briefed and led by the PLATI. The brief should include a detailed discussion of LAT terminology and concepts, planned tactics, maneuver specifics and LAT ROC.
 - a. Circuit 1. The PLATI shall demonstrate proficiency in the following maneuvers at comfort level, chased by a MAWTS-1 Instructor or squadron WTI on an approved course:
 - (1) 50% dive recovery to comfort level
 - (2) Level turns
 - (3) Ridgeline crossings
 - (4) Speed rush baseline demonstration
 - (5) Break turns
 - (6) Minimum Altitude Capable (MAC). Currently prohibited without waiver MAC without a waiver from HQMC.
 - (7) Threat reaction drill
 - (8) The LATI will introduce increased task loading at various points in the circuit.

- b. Circuit 2. The LATI will perform all circuit 1 maneuvers. The PLATI shall chase, demonstrating proper chase position, error analysis, and flight control.
- c. Circuit 3. The PLATI shall lead a section LAT circuit performing section low altitude SAM weave or SCAT.

LATI 511 E (2) FA-18s D

Goal: Demonstrate proficiency in briefing, executing, and debriefing a section tactical LAT circuit.

Requirements:

- 1. Evaluated by a MAWTS-1 instructor or a squadron WTI who has completed the standardization check.
- 2. Flight briefed and led by the PLATI. The brief should include a detailed discussion of LAT terminology and concepts, planned tactics, maneuver specifics and LAT ROC.
 - a. Circuit 1. The PLATI shall chase or perform any of the maneuvers from the previous 2 sorties as directed by the LATI.
 - b. Circuit 2. The PLATI shall lead a section tactical LAT circuit consisting of the following:
 - (1) Called/Uncalled turns
 - (2) Section low altitude SAM weave or SCAT
 - (3) Ridgeline crossings
 - (4) Section target attack

RECERTIFICATION REQUIREMENTS

Refresher:

- 1. Previously certified FA-18 LATIs returning to the FA-18 following more than 540 days out of model must complete the LATI re-certification course. After completion of the course with a MAWTS-1 Instructor or squadron WTI, the LATI designation can be granted by the Commanding Officer. The following comprises the re-certification course:
 - a. The aircrew shall meet all prerequisites listed previously.
 - b. The aircrew shall complete the academic syllabus listed previously.
 - c. The aircrew shall complete an LATI flight syllabus, outlined by the squadron

- WTI, which prepares him for certification.
- d. The aircrew shall complete the LATI-4 sorties evaluated by a MAWTS-1 Instructor or squadron WTI LATI.

Transition / Conversion:

1. Pilots designated as a LATI in an aircraft other than the FA-18 who transition to or undergo conversion to the FA-18, must complete the entire FA-18 LATI Certification Course.

FA-18 AIR COMBAT TACTICS INSTRUCTOR (ACTI) CERTIFICATION COURSE

Course Objective: The MAWTS-1 FA-18 ACTI program certifies NA and NFOs as capable of conducting ground and airborne instruction of FA-18 Air-to-Air employment.

Length: IUT: 20 classroom hours and 10 sorties.

Cert: Open and Closed book exam, Oral discussion, and 3 sorties.

Notes:

1. The ACTI program was established to ensure that ACM training is performed safely through the supervision of the mature flight leadership of a squadron commander designated ACTI.
2. The ACTI program is the foundation for the FA-18 air-to-air mission and is recognized as a quality course of instruction that has significantly increased the briefing, execution, and instructional debriefing skills of Marine FA-18 pilots and WSOs.
3. The certification process for the squadron ACTI and PACTI, MAWTS-1 will use a three-strike concept for the certification process. A strike will be an evaluation of a brief, flight or debrief that does not meet minimum standards. A PACTI has nine exposure events in the three flights (3 briefs, 3 flights, and 3 debriefs). Each event will be mutually exclusive with regards to evaluation. In other words a brief and execution that are well above minimum standards do not cancel out a debrief that does not meet minimum standards. That would constitute a strike.
4. In the event of an ACTI failure (3 strikes), the certification will be terminated and another attempt will not be allowed for at least one month. The examination scores will remain current for six months. The execution minimum performance standards for each flight are from the T&R Vol II.

Prerequisites

1. Designated as ACM qualified in accordance with T&R Vol I.
2. Completed all 200 and 300 level Air-to-Air sorties outlined in T&R Vol II.
3. Pilots must be designated section lead. WSO must have comparable experience.
4. Hold a secret or higher security clearance.
5. Selected by the Commanding Officer.

IUT STAGE

IUT Academic Syllabus:

1. Self-Paced Reading:

- a. TOPGUN MANUAL, Ch. 1, *Rule of Thumb*
- b. TOPGUN MANUAL, Ch. 7, *APG-65/73*
- c. TOPGUN MANUAL, Ch. 13, *IR Missiles*
- d. TOPGUN MANUAL, Ch. 14, *AIM-7*
- e. TOPGUN MANUAL, Ch. 15, *AIM-120 AMRAAM*
- f. TOPGUN MANUAL, Ch. 33, *1v1*
- g. TOPGUN MANUAL, Ch. 36, *Strike Fighter Missions*
- h. TOPGUN MANUAL, Ch. 40, *FA-18 Employment Part I*
- i. TOPGUN MANUAL, Ch. 41, *FA-18 Employment Part II*
- j. TOPGUN MANUAL, Ch. 44, *Adversary Instructor*
- k. TACMAN Vol II, Ch. 1, *Weapon System Integration, Stores Management Set, A/A Degraded Modes*
- l. TACMAN Vol II, Ch. 2, *AIM-7, AIM-9-8, AIM-120, M61A1*
- m. TACMAN Vol II, Ch. 3, *Air-to-Air Tactical Considerations*
- n. TACMAN Vol II, Ch. 4, *Fighter vs. Fighter Maneuvering*
- o. TACMAN Vol II, Ch. 5, *Air-to-Air Mission Employment*
- p. TACMAN Vol II, Ch. 7, *FA-18 vs. Helicopter*
- q. TACMAN Vol II, Ch. 11, *EA and Radar EP*
- r. TACMAN Vol II, Ch. 12, *Performance Charts*
- s. TACMAN Vol III, Ch. 1, *Electronic Warfare Equipment*
- t. TACMAN Vol III, Ch. 5, *Data Link*
- u. TACMAN Vol III, Ch. 6, *Tactical Aircrew Combat Training System*
- v. AFTTP 3-1 Vol II, Ch. 6, *Fighter Aircraft and Armament*
- w. AFTTP 3-1, Vol II, Ch. 9, *Adversary Air Employment, Operations and Training*
- x. AFTTP 3-1, Vol II, Ch. 11, *Electronic Warfare*
- y. AFTTP 3-1, Vol II, Ch. 13, *Threat Countertactics*
- z. MCRP 3-25B, *Communications Brevity*
- aa. FA-18D Crew Coordination

2. Lectures:

- | | |
|---|---------------------|
| a. TOPGUN FA-18 Briefing and Debriefing | TOPGUN CLASSIFIED |
| b. TOPGUN FA-18 BFM Basics and Offensive BFM | TOPGUN CLASSIFIED |
| c. TOPGUN Defensive BFM | TOPGUN CLASSIFIED |
| d. TOPGUN High Aspect BFM | TOPGUN CLASSIFIED |
| e. MDTC FA-18 Multi-plane Engaged Maneuvering | MDTC CLASSIFIED ASP |
| f. MDTC FA-18 A/A Gunnery | MDTC CLASSIFIED ASP |

- | | |
|-------------------------------------|----------------------|
| g. MDTC FA-18 Fighter Missions | MDTC CLASSIFIED ASP |
| h. ATTP | |
| i. MDTC FA-18 Mission Employment I | MDTC CLASSIFIED ASP |
| j. MDTC FA-18 Mission Employment II | MDTC CLASSIFIED ASP |
| k. MDTC FA-18 APG-65/73 | MDTC CLASSIFIED ASP |
| l. MDTC FA-18 AIM-9 | MDTC CLASSIFIED ASP |
| m. MDTC FA-18 AIM-7 | MDTC CLASSIFIED ASP |
| n. MDTC FA-18 AIM-120 | MDTC CLASSIFIED ASP |
| o. FA-18 EW Suite | FA-18 CLASSIFIED ASP |
| p. MDTC FA-18 Threat Tactics | MDTC CLASSIFIED ASP |

3. Chalk Talks:

- a. FA-18 Air Combat Tactics Instructor Course (this document)
- b. Lessons Learned (from the MAWTS-1 SIPRNET website)

IUT Flight Syllabus:

1. The scope and duration of the ACTI flight work-up should be based upon the needs of the individual PACTI. It should be developed to ensure that the PACTI is fully prepared for the certification and is performing at an instructor level.
2. The flight work-up is intended to allow the PACTI to refine his instructional skills by practicing briefing, tactical execution, and debriefing.
3. The sorties shall be evaluated by an ACTI. Mission performance standards for the work-up sorties are per the T&R Vol II.
4. The minimum suggested IUT flight syllabus is:
 - a. Three 1v1 BFM sorties
 - b. Three 2v2 DACT / SEM sorties
 - c. Three 2v2 DACT / PID sorties
 - d. One 1v1 BFM warm-up sortie

CERTIFICATION STAGE

Certification Academic Syllabus:

1. Exam:
 - a. Closed Book Exam:
 - (1) A MAWTS-1 instructor will administer the closed book examination. The minimum-passing grade for the exam is 85% and the time limit is one hour. In the event of an exam failure, the certification will be terminated and

another exam attempt will not be allowed for at least one month.

b. Open Book Exam:

- (1) A MAWTS-1 instructor will administer the open book examination. The minimum-passing grade for the exam is 95% and the time limit is one hour.
- (2) In the event of an exam failure, the certification will be terminated and another exam attempt will not be allowed for at least one month.
- (3) The exam will demonstrate the PACTI's ability to locate answers to specific FA-18 and threat maneuvering, weapon, and system employment questions using existing classified publications.
- (4) Squadron training officers will ensure current reference publications are available for the open book exam.

c. Oral Discussion:

- (1) A MAWTS-1 instructor will administer the oral discussion on FA-18 tactical employment. Each PACTI will be required to expand on a single topic chosen from the following list for 10-15 minutes:
 - (a) E/M diagram comparison
 - (b) Category simulation / gameplan
 - (c) Timeline construction
 - (d) Risk assessment vs. mission objectives
 - (e) DEZ planning
 - (f) Night considerations
 - (g) Radar mission planning
 - (h) VID tactics and justification (gameplan vs. threat)
 - (i) Escort considerations
 - (j) HVAAP

Certification Flight Syllabus:

1. MAWTS-1 Instructor Flights:

- a. A MAWTS-1 instructor may fly two 1v1 events on the same day, but will only fly one 2v2 event per day. This is based on the 1v1 event typically lasting six hours and the 2v2 events lasting between seven and eight hours. This is non negotiable.

ACTI 571 E (2) FA-18s D

Goal: Demonstrate proficiency in briefing, executing and debriefing at an instructor level. Emphasis is placed on flight leadership, execution and instructional skills (briefing and debriefing techniques, recall, reconstruction and analysis).

Requirements:

1. Operable VTR/CVRS, APG-65/73, ALR-67 and ALE-39/47.
2. Chaff and flares.
3. CATM-9-8.
4. Scheduled airspace that supports engaged maneuvering, supersonic flight and chaff / flare use. A minimum 15,000 feet of maneuvering airspace and maximum hard deck of 10,000 feet is required.
5. For scheduling, the ACTI-571 E is the only flight that MAWTS-1 Instructors will evaluate 2 flights in 1 day. ACTI-572 and ACTI-573 will be single event crew days.
6. Brief:
 - a. Target audience for this brief is a new aircrew just out of the FRS. He should understand the definitions associated with BFM. He should have had the basics of BFM during aircrew training.
 - b. The PACTI shall brief, execute and debrief 1v1 maneuvers designated by the MAWTS-1 Instructor. FA-18A/C PACTIs will normally be given five maneuvers to brief, while FA-18D PACTIs are given six maneuvers.
 - c. The following is the list of possible maneuvers:
 - (1) Snap Shot Drill
 - (2) Horizontal Scissors
 - (3) Rolling Scissors
 - (4) OFF / DEF Perch BFM from 3k', 6k' and 9k' starts
 - (5) Forward Quarter Missile Defense
 - (6) Neutral Maneuvering vs. Category I-IV Aircraft (beam and butterfly fly)
 - (7) Guns Defense
 - d. The PACTI will be prepared to brief covering the BFM items located on the MAWTS-1 SIPRNET website. In addition, the following are considered minimum briefing items for each maneuver:
 - (1) Throttle
 - (2) Stick & Rudder
 - (3) Target Airspeed
 - (4) Alpha Control
 - (5) Cockpit Gouge

- (6) LV Placement
- (7) Expendable Usage
- (8) Weapons employment
- (9) Radar modes

- e. Omission of any item throughout the brief would not meet minimum standards. For example, a brief that discusses airspeed goals throughout but not alpha control, and stick and throttles considerations would be an example of brief evaluated as not meeting the minimum standards. Or if the PACTI briefs airspeed, alpha, and stick and throttle but never addresses LV placement, expendables or weapons employment would be evaluated as not meeting the minimum standards.

7. Execution:

- a. In most cases, four sets are required to complete the certification flight.
- b. The PACTI should be proficient at flying Threat Aircraft Simulations (i.e. simulating Cat I-IV bandit aircraft). The PACTI will have a thorough working knowledge on this subject and will be able to brief / provide techniques as required. (Ref TOPGUN Manual Threat Chapter). During the certification, the MAWTS-1 instructor may task the PACTI to fly the simulation.
- c. The simulated A/A loadout for FA-18A+/C/D will be 1/1/2/G (1 AIM-120, 1 AIM-7, 2 AIM-9, Gun) and for FA-18A will be 0/2/2/G. Unlimited loadouts are not allowed.
- d. The mission performance standards are the same as listed in the T&R Vol II. Success will be based upon accomplishing 60% of the following mission performance standards.
- e. Snap shot drill mission performance standard:
 - (1) Takes valid shots (1 of 3 required)
- f. Rolling scissors mission performance standards:
 - (1) Manages FA-18 energy to maximize performance of the aircraft
 - (2) Recognizes LARs and employs the appropriate weapons
 - (3) Takes valid shots
- g. Horizontal scissors mission performance standards:
 - (1) Manages FA-18 energy to maximize performance of the aircraft
 - (2) Recognizes LARs and employs the appropriate weapon
 - (3) Takes valid shots

- h. Offensive perch mission performance standards:
 - (1) Maintains offensive position and achieves a valid follow on shot
 - (2) Recognizes LARs and employs the appropriate weapon
 - (3) Takes valid shots
 - i. Defensive perch mission performance standards:
 - (1) Manages FA-18 energy to deny follow on shots by offensive aircraft
 - (2) Recognizes bandit WEZ and conducts the appropriate defense
 - (3) Executes timely expendable usage (defeat IR missiles)
 - j. Forward quarter missile defense mission performance standards:
 - (1) Execute a FQMD to defeat SAR-1 missile and follow on IR-3 missiles
 - (2) Execute briefed gameplan
 - (3) Takes valid shots
 - k. Neutral maneuvering vs. CAT I-IV mission performance standards:
 - (1) Employs appropriate gameplan against adversary
 - (2) Recognizes LARs and employs appropriate weapons
 - (3) Takes valid shots
 - l. Guns defense mission performance standards:
 - (1) Manages FA-18 energy to deny follow on shots by offensive aircraft
 - (2) Recognizes bandit WEZ and conducts appropriate defense
8. Debrief:
- a. The debrief should be comprised of the following items:
 - (1) Review of starts parameters and PADS
 - (2) Reconstruct via the white board and / or models
 - (3) Analyze reconstruction for learning points
 - (4) Gameplan execution and assessment
 - (5) Mission Performance Standards analyzed
 - b. The PACTI shall cover the following items in the tape review of each set:
 - (1) Validate gameplan execution
 - (2) Validate all shots
 - (3) BFM mechanics
 - (4) Airspeed control

- (5) Alpha control
- (6) LV placement
- (7) OOP maneuvering
- (8) Expendable usage
- (9) Merge mechanics
- (10) Bug mechanics
- (11) Deck transitions
- (12) Weapons employment
- (13) Crew coordination
- (14) Lost sight mechanics

- c. The MAWTS-1 instructor will evaluate the debrief using the same criteria as the brief. A debrief that identifies the errors but does not discuss the correction is a debrief that does not meet the minimum standard. Additionally, a debrief that reviews the tape for shot validation and gameplan execution but does not evaluate airspeed, alpha, G's, radar acquisition modes and weapons will not meet the minimum standard.

- (1) 1v1 TACTS debrief is recommended. The MAWTS-1 instructor will provide guidance on this.

9. FA-18D Certifications:

- a. FA-18D PACTIs will be certified as individual instructors.
- b. FA-18D PACTIs will be crewed with a MAWTS-1 Instructor.
- c. The briefing and debriefing responsibilities will be split. FA-18D crews will normally be given six maneuvers of which the pilot and WSO will each brief three respectively. They will be given the maneuvers / sets the night before the sortie and told just prior to the brief which PACTI will brief which maneuvers.
- d. WSOs will be responsible for analyzing gameplan execution, airspeed, alpha, LV placement, merge mechanics, weapons and radar employment during the flight. Between each set, after notes are complete, the WSO shall debrief the MAWTS-1 instructor on a single error or significant event of the last set (not to interfere with the timely execution of the flight). The intent of this exercise is to have the WSO instruct a new pilot on a significant error that he can correct on the next set, not to reconstruct the entire engagement.

ACTI 572 E (2) FA-18s and (2) Dissimilar Adversaries D

Goal: Demonstrate proficiency in briefing, executing and debriefing basic section fighter

maneuvers at an instructor level. Emphasis is placed on flight leadership, execution and instructional skills (briefing and debriefing skills, mutual support, engaged communication, engaged maneuvering, minimizing time to kill, expendable usage, reconstruction and analysis).

Requirements:

1. Operable VTR/CVRS, APG-65/73, ALR-67 and ALE-39/47
2. Chaff and flares
3. CATM-9-8
4. Scheduled airspace that supports engaged maneuvering, supersonic flight and chaff / flare use. A minimum 15,000 feet of maneuvering airspace and maximum hard deck of 10,000 feet is required.
5. TACTS shall be used if available.
6. Two adversary aircraft are required. Either radar-missile capable dissimilar adversary (i.e. F-14, F-15, F-16, etc.) or professional adversaries (i.e. VMFT-401, TOPGUN, VFC squadrons, etc.) are required. **“In house” bogies are not authorized.** The MAWTS-1 IP will clarify any additional bogey tasking and/or simulation.
7. Brief:
 - a. Target audience for this brief is an aircrew who is working towards the ACM qualification. The aircrew needs a detailed brief on section engaged tactics.
 - b. The PACTI shall brief, execute and debrief 2v1 and 2v2 engaged maneuvering sets designated by the MAWTS-1 Instructor. FA-18A/C/D PACTIs will be given the three maneuvers listed below:
 - (1) Tap-the-Cap
 - (2) Visual Set – Rear Quarter
 - (3) Visual Set – Abeam
 - c. The Tap-the-Cap and visual sets PADS will be briefed in the bogey brief and / or in the TAC Admin for the flight.
 - d. The brief will follow the section engaged maneuvering format located on the MAWTS-1 SIPRNET website. The overall briefed engaged maneuvering gameplan will be executed on both the Tap-the-Cap and the visual set.
 - (1) The Tap-the-Cap set is partial task training. The intent is to detect and

engage an unknown number of bandits through visual lookout, radar and/or RWR. It will be briefed as a 2vX threat. The Tap the Cap will be established within 10nm of a navigation or geographical point at 15-19k', for three engagements. The section will not use AIC or datalink to detect the bandits. Fighters will defend against critical spikes only. Bandits will be tasked to use the appropriate radar mode not to give the fighters critical spikes. This will allow the fighters to remain hot and not notch when spiked. Also, bandits will not take BVR shots and will call "smoke in the air" with cardinal heading when within visual range. See the *Leading Edge* Spring 2002, Volume 2, Issue 1 for a detailed discussion on bandits' tasking. The bandits will be tasked to aggress the section as two separate singles and as a section. The order of these three separate attacks will be unknown.

8. Execution:

a. Three engagements are required to complete the certification flight.

(1) There will be no pre-merge kills. 3/9 line passage with a single bandit is required to employ weapons.

(2) The simulated A/A loadout for FA-18A+/C/D will be 1/1/2/G (1 AIM-120, 1 AIM-7, 2 AIM-9, Gun) and for FA-18A will be 0/2/2/G. Unlimited loadouts are not allowed. There will not be a reload between engagements in the Tap-the-Cap set.

(3) The Tap-the-Cap will be executed first followed by the visual sets.

(4) Tap-the-Cap mission performance standards:

- (a) Maintains mutual support
- (b) Detect bandit through visual lookout / SRR / RWR
- (c) Deny / defeat bandit shots
- (d) Kill or separate through effective engaged maneuvering
- (e) Clear, concise engaged communication

(5) Visual set mission performance standards:

- (a) Maintains mutual support
- (b) Section able to survive and achieve a valid kill shot
- (c) Effective engaged maneuvering to defeat the bandit
- (d) Utilizes proper communications brevity

9. Debrief:

a. The debrief should be comprised of the following elements:

- (1) Fighter element scrub
- (2) Mass debrief
- (3) Review of start parameters and PADS
- (4) Reconstruction via the board and TACTS
- (5) Fighter debrief
- (6) Gameplan execution and assessment
- (7) Mission and training objectives analyzed
- (8) Mission Performance Standards analyzed

b. The PACTI shall cover the following items in the fighter debrief:

- (1) Validate all shots
- (2) Validate gameplan execution
- (3) BFM mechanics
- (4) Airspeed control
- (5) Alpha control
- (6) LV placement
- (7) OOP maneuvering
- (8) Expendable usage
- (9) Merge mechanics
- (10) Bug mechanics
- (11) Deck transitions
- (12) Weapons employments
- (13) Crew coordination
- (14) Mutual support
- (15) Lost sight mechanics

c. The MAWTS-1 instructor will evaluate the debrief using the same criteria as the brief. A debrief that identifies the errors but does not discuss the correction is a debrief that does not meet the minimum standard. Additionally, a debrief that reviews the tape for shot validation and gameplan execution but does not evaluate airspeed, alpha, Gs, acq modes and weapons will not meet the minimum standard.

- (1) Combination of white board and TACTS reconstruction will be used in the debrief. The MAWTS-1 instructor will clarify white board and TACTS integration prior to the hop.

10. FA-18D Certifications:

- a. FA-18D PACTIs will be certified as individual instructors.
- b. FA-18D PACTIs will be crewed with the MAWTS-1 instructors.
- c. The MAWTS-1 Instructor will assign which PACTI will conduct the Bogey Brief.

- d. Just prior to the brief, the PACTIs will be told which half they will be briefing. The first PACTI will brief Admin, Tac Admin, and the SEM brief up to and including Engagement Phase / Engagement Mechanics and one of the 3 engagements. The second PACTI will brief the remaining 2 engagements, separation phase, and common errors. For example, the MAWTS-1 Instructor could assign the WSO to brief Admin, Tac Admin, MPF, Concepts & Definitions, Engaged Comm, Detection Phase, Engagement Phase and the Forward Quarter Engagement. The pilot would then brief the Stern Engagement, Beam Engagement, Separation Phase and Common Errors.

ACTI 573 E (2) FA-18s and (2) Dissimilar Adversaries D

Goal: Demonstrate proficiency in briefing, executing and debriefing section tactics at an instructor level. Emphasis is placed on flight leadership, execution and instructional skills (briefing and debriefing skills, intercept tactics, VID mechanics, sorting, AIC integration, sensor integration, communications and weapons employment).

Requirements:

1. Operable VTR/CVRS, APG-65/73, ALR-67 and ALE-39/47
2. Chaff and flares
3. CATM-9-8
4. Data link
5. TFLIR
6. ATTP
7. AIC support
8. Scheduled airspace that supports 40nm radar-intercepts, engaged maneuvering, supersonic flight and chaff / flare use. A minimum of 15,000 feet of maneuvering airspace and maximum hard deck of 10,000 feet is required.
9. TACTS will be used if available.
10. Two adversary aircraft are required. Either radar-missile capable dissimilar adversary (i.e. F-14, F-15, F-16, etc.) or professional adversaries (i.e. VMFT-401, TOPGUN, VFC squadrons, etc.) are required. **"In house" bogies are not authorized.** The MAWTS-1 IP will clarify any additional bogey tasking and/or simulation. Bogies will simulate single sortable group (SSG), BVR capable, RWR reactive and will be tasked to fly AFTTP 3-1 formations and tactics. For the PHID not satisfied and late PHID intercept the bandits will remain SSG to the merge.

During the PHID satisfied intercept the bandits will remain SSG until 20nm and then maneuver executing 3-1 tactics or RWR react. The MAWTS-1 IP will task the bandit with specific requirements for the flight.

- a. The bandits **shall** utilize one "Monte Carlo" aircraft on the PHID satisfied intercept.

- (1) Monte Carlo Definition: One bandit (which one is unknown to the fighters) is designated in the brief as "two valid kills required." When initially "killed" by the fighters, the bandit should respond with "Pk Continue" and not kill remove. Subsequent kills on that bandit will be honored. The intent is to duplicate the less than 100% Pk of our weapon systems.

- (2) Monte Carlo will be utilized when fighters are shooting BVR only. WVR shots would be visually validated for P_k concerns.

11. Brief:

- a. The target audience is aircrew who are more experienced and working towards completing the ACM qualification. The aircrew needs to be told how to optimize his sensor parameters and how to sort. The aircrew needs to be told how to execute an intercept with PHID satisfied and PHID not satisfied.
- b. The PACTI shall brief, execute and debrief 2v2 section intercepts.
- c. The PACTI shall develop mission objectives and a credible scenario based on the mission assigned by the MAWTS-1 Instructor. Possible missions are:
 - (1) Screen
 - (2) Close Escort
 - (3) Self Escort
 - (4) HVAAP
 - (5) Point Defense
- d. The PACTI shall complete a fighter brief focusing on all phases of the intercept to include formation, sensors, comm, and crew coordination (FA-18D crews only) applied to the assigned fighter mission.

12. Execution:

- a. Two intercepts are required to complete this certification flight.
- b. The simulated A/A loadout for FA-18A+/C/D will be 2/1/2/G (2 AIM-120, 1 AIM-7, 2 AIM-9, Gun) and for FA-18A will be 0/2/2/G.
- c. Three radar intercepts will be executed. Be prepared for PHID satisfied, PHID

not satisfied and late PHID.

- d. The option to have autonomous PHID within the flight or late declaration from GCI will be at the MAWTS-1 instructor's discretion.
- e. Each intercept will be started with at least 35nm separation.
- f. VID mission performance standards:
 - (1) Employs briefed VID gameplan
 - (2) Achieves a sort as briefed
 - (3) Maintains mutual support
 - (4) Achieves a valid shot at merge
- g. BVR mission performance standards:
 - (1) Sanitizes assigned airspace
 - (2) Target as assigned and achieves a valid shot
 - (3) Takes valid shots

13. Debrief:

- a. The debrief should be comprised of the following elements:
 - (1) Fighter element scrub
 - (2) Mass debrief
 - (3) Reconstruction via the board and TACTS
 - (4) Fighter debrief
 - (5) Gameplan execution and assessment
 - (6) Mission and training objectives analyzed
 - (7) Mission Performance Standards analyzed
- b. The PACTI will cover the following items in the fighter debrief:
 - (1) Comm / flow review
 - (2) Tape review
 - (3) Radar set up and mode utilization
 - (4) Block sanitization
 - (5) Cursor placement
 - (6) Mate, meld and sort mechanics
 - (7) Validate shots
 - (8) Maneuvering target mechanics
 - (9) AZ/EL usage
 - (10) Short range radar mechanics
- c. The MAWTS-1 instructor will evaluate the debrief using the same criteria as the brief. A debrief that identifies the errors but does not discuss the correction

is a debrief that does not meet the minimum standard. Additionally, a debrief that reviews the tape for shot validation and gameplan execution but does not evaluate airspeed, alpha, Gs, acq modes and weapons will not meet the minimum standard.

- d. Combination of white board and TACTS reconstruction will be used in the debrief. The MAWTS-1 instructor will clarify white board and TACTS integration prior to the hop.

14. FA-18D Certifications:

- a. FA-18D PACTIs will be certified as individual instructors.
- b. FA-18D PACTIs will be crewed with the MAWTS-1 instructors.
- c. The MAWTS-1 Instructor will assign which PACTI will conduct the Bogey Brief.
- d. The briefing and debriefing responsibilities will be split. Just prior to the brief the PACTIs will be told which half they will be briefing. The first half will include admin, TAC Admin, mission planning factors, pre-commit, commit, intercept, and maneuvering targets. The second half will be weapons employment, approaching the merge, clearing the merge, defensive considerations (with emphasis on PHID not satisfied), what ifs and keys to success.
- e. Each PACTI will be the TAC LEAD for at least one of the radar intercepts.

RECERTIFICATION REQUIREMENTS

Refresher:

1. Certified FA-18 ACTI aircrew returning to the FA-18 after more than 540 days out of model must complete the ACTI certification course. Upon re-certification by a MAWTS-1 instructor, the ACTI designation may be made by the Commanding Officer. The following comprises the re-certification course:
 - a. The PACTI shall meet all the prerequisites required for initial certification.
 - b. The PACTI shall complete the formal academic syllabus.
 - c. The PACTI shall complete an appropriate flight work-up syllabus as outlined by the squadron WTI.
 - d. The certification shall consist of the closed book exam and flying a 2v2 sortie with a MAWTS-1 instructor. The flight shall consist of two intercepts and one visual set. The brief shall be a complete fighter brief focusing on the phases of

the intercept applied to the assigned fighter mission and a visual set. See ACTI-2 and ACTI-3 for the appropriate mission performance standards and debrief items. Each item of the debrief shall be covered and the mission performance standards shall be analyzed.

Transition / Conversion:

1. Aircrew designated as an ACTI in an aircraft other than the FA-18 who transition or undergo conversion to the FA-18, must complete the entire FA-18 ACTI Certification Course.

FA-18 NIGHT SYSTEMS INSTRUCTOR (NSI) CERTIFICATION COURSE

Course Objective: To certify an FA-18 aircrew as an instructor capable of safely conducting ground and airborne instruction of the FA-18 night systems flight syllabus outlined in MCO P3500.15.

Length: IUT: 4 classroom hours, 3 sorties (NSI High) and 7 sorties (NSI)
Cert: Closed book exam, oral discussion, and 2 sorties (NSI High) / 3 sorties (NSI Low).

Notes:

1. The FA-18 NSI Program is developed by MAWTS-1. Upon certification by MAWTS-1, the NSI designation may be made at the discretion of the squadron Commanding Officer.
2. The FA-18 NSI Program is designed to certify both FA-18 pilots and weapons systems officers, capable of instructing non-night systems qualified aircrew in night systems operations.
3. The NSI qualification is required for low altitude capable FA-18C/D squadrons. The NSI (High) qualification is a qualification limited to FA-18A/C squadrons that have an altitude minimum due to airframe restrictions, however, no lower than 1000'. An NSI (High) can only instruct aircrew for an NSQ (High) qualification.

Prerequisites

1. NSI (Low):
 - a. Night Systems Qualified Low (NSQ Low) and current in accordance with MCO P3500.14 and MCO P3500.15.
 - b. Successful completion of applicable night system sorties outlined in MCO P3500.15.
 - c. Designated and current LATI (Pilots).
 - d. Minimum of 50 hours of NVG time.
 - e. Designated a division leader for pilots and comparable experience for WSOs.
 - f. Selected by Commanding Officer.

2. NSI (High):
 - a. NSQ (High) IAW MCO P3500.14F and 3500.15B.
 - b. Successful completion of applicable night system sorties outlined in MCO P3500.15B.
 - c. Minimum 25 hours NVG time.
 - d. Designated a division leader.
 - e. Assigned to an NVD modified FA-18 squadron.
 - f. Selected by Commanding Officer.

IUT STAGE

IUT Academic Syllabus:

1. Self-Paced Reading:
 - a. TACMAN Vol I, Ch. 5, *Night Vision Device Employment & Tactics*
 - b. TACMAN Vol II, Ch. 6, *FA-18 Night Fighter Tactics and Degraded Weather Considerations*
 - c. TACMAN Vol III, Ch. 7, *Night Vision Characteristics*
 - d. *MAWTS-1 Fixed Wing Night Vision Device Manual, 2nd Edition*
2. Lecture:
 - a. FA-18 Night Systems Tactical Considerations **FA-18 CLASSIFIED ASP**
3. Chalk Talks:
 - a. FA-18 Night System Instructor Course
 - b. Lessons Learned and MAWTS-1 NSI Standardization notes

IUT Flight Syllabus:

1. The NSI flight work-up should be determined by the needs of the PNSI and recommended by the squadron WTI to the Operations Officer.
2. The sorties will be evaluated by an NSI. Mission performance standards are per the T&R. The minimum suggested sorties are:
 - a. Three aggressed DAS sorties with ordnance (NSI Low / NSI High)

- b. Four LAT chase / DAS sorties (NSI)

CERTIFICATION STAGE

Certification Academic Syllabus:.

1. Written Exam:
 - a. A MAWTS-1 instructor will administer the written examination. The minimum-passing grade for the exam is 85%. In the event of an exam failure, the certification will be terminated and **another attempt shall not be allowed for at least one month.**
2. Oral Discussion:
 - a. The PNSI will present a 15-30 minute discussion on one of the following topics:
 - (1) Night attack considerations in the LAT environment
 - (2) Armed Recce in the night environment
 - (3) Night CAS procedures
 - (4) Tactical employment of the NITEHAWK FLIR
 - (5) Night surface to air threat reaction
 - (6) Battlefield illumination

Certification Flight Syllabus:

NSI 500 E _____ (2) FA-18s and (1-2) Adversaries _____ N _____

Goal: Demonstrate proficiency in briefing, instructing, executing and debriefing a formation and air to air intercept mission with emphasis on night systems management and section operations with night vision devices.

Requirements:

1. AN/AAS-38 A/B
2. CATM-9-8
3. Chaff and flares
4. No LUX requirement
5. Evaluated by any NSI
6. Brief:

- a. Target audience for this brief is an aircrew who understands the squadron SOP, but has limited exposure to NVDs in the squadron and is beginning his workup for NSQ.
- b. The PNSI shall brief, execute and debrief a formation and air-to-air intercept sortie.
- c. The brief should show the squadron standard brief with night considerations included. There should not be an NSI sortie specific brief.

7. Execution:

- a. Conduct formation familiarization at medium altitude demonstrating administrative and tactical formations under various lighting conditions.
- b. Conduct a minimum of 3 air-to-air intercepts versus a non-maneuvering bogey to emphasize sensor usage in the AAW role. One intercept mission will be a night ICAO intercept and Escort.
- c. Conduct post mission rendezvous and battle damage checks.
- d. Mission performance standards:
 - (1) Maintains proper visual mutual support
 - (2) Conduct proper radar usage

8. Debrief:

- a. The PNSI should thoroughly review the tactical phase of the flight emphasizing positioning and maneuvering throughout the runs. Special emphasis should be placed on problem areas encountered during the flight.
- b. As the evolution is recreated, learning points must be emphasized. The events that occurred need to be analyzed. The focus should be on the "what and why" of each learning point. Debrief the execution and, once analyzed, give solutions to the errors or suggest techniques that might improve the outcome of the event if it were to be flown again. In essence, this is the "I" part of the certification.
- c. VTR tapes should be reviewed for proper radar work as well as FLIR and NAVFLIR sensor usage. Be sure to emphasize delivery parameters and profiles ensuring proper employment of weapons and sensors as per the brief.

9. FA-18D Certification:

- a. Briefing responsibilities will be split. Generally, one PNSI will brief up to the intercept phase, while the remaining PNSI discusses weapons employment through intercept completion and “what ifs”.

NSI 501 E (2-4) FA-18s and (2-4) Adversaries N

Goal: Demonstrate tactical proficiency in planning, briefing, instructing, executing and debriefing a night interdiction mission in a medium to high threat environment that includes an air-to-air threat. Emphasis on mission planning, attack parameters, self-escort fighter gameplan, delivery modes, formation considerations, weapons delivery and target acquisition methods using NS devices. Scenario is at the discretion of the squadron NSI or the MAWTS-1 Instructor.

Requirements:

1. No LUX requirement
2. Lot XI aircraft and below will conduct operations above 1000' AGL
3. Lot XII aircraft and above will conduct operations IAW OPNAV 3710
4. Chaff and flares
5. AN/AAS-38 A/B
6. CATM-9-8
7. Ordnance as applicable per range (MK-76/BDU-45/LGTR)
8. A MAWTS-1 NSI will evaluate the sortie for Lot XI aircraft and below
9. Any NSI will evaluate the sortie for Lot XII aircraft and above
10. Brief:
 - a. Target audience for this brief is an aircrew who is NSQ HI qualified and understand the squadron SOP, yet have limited experience in conducting night DAS.
 - b. The PNSI shall brief, execute and debrief an air interdiction sortie.
 - c. The brief should show the squadron standard brief with night considerations included. There should not be an NSI sortie specific brief.

11. Execution:

- a. Conduct a section or multi-plane air interdiction mission to a tactical range.
- b. Conduct multiple re-attacks with various delivery parameters and modes, consistent with the threat.
- c. Conduct post mission rendezvous and battle damage checks.
- d. Mission performance standards:
 - (1) Maintains briefed tactical formations on ingress and egress
 - (2) Recognizes and react appropriately to simulated threats, to include surface-to-air and air-to-air
 - (3) Delivers ordnance on planned DMPI within +/- 15 seconds of TOT

12. Debrief:

- a. The PNSI should thoroughly review the tactical phase of the flight emphasizing positioning and maneuvering throughout the runs. Special emphasis should be placed on problem areas encountered during the flight.
- b. As the evolution is recreated, learning points must be emphasized. The events that occurred need to be analyzed. The focus should be on the "what and why" of each learning point. Debrief the execution and, once analyzed, give solutions to the errors or suggest techniques that might improve the outcome of the event if it were to be flown again. In essence, this is the "I" part of the certification.
- c. VTR tapes should be reviewed for proper radar work as well as FLIR and NAVFLIR sensor usage. Be sure to emphasize delivery parameters and profiles ensuring proper employment of weapons and sensors as per the brief.

13. FA-18D Certification:

- a. Briefing responsibilities will be split. Generally, one PNSI will brief up to through Target Area ingress including AA considerations and Threat Reactions, while the other PNSI will brief from Target Area Tactics through Go/No Go criteria.

NSI 502 E (2) FA-18s N

Goal: Demonstrate proficiency in briefing, performing, and chasing basic night LAT maneuvers and section target attacks.

Requirements:

1. .0022 or greater LUX required
2. Training range or low level route that allows flight down to 300' AGL
3. Chaff and flares
4. AN/AAS-38 A/B
5. NAVFLIR
6. CATM-9-8
7. Ordnance as applicable per range (MK-76/BDU-45/LGTR)
8. A MAWTS-1 NSI will evaluate the sortie
9. Brief:
 - a. Target audience for this brief are aircrew that are LAT qualified and are almost NSQ LO qualified. They have already completed NS 380 through NS 386 but are conducting night LAT for the first time. They understand the squadron SOP.
 - b. The PNSI will brief, execute and debrief a sortie that combines LAT and air interdiction.
 - c. The brief should show the squadron standard brief for a low altitude air interdiction sortie with night and LAT considerations included. There should not be an NSI sortie specific brief.
 - d. The focus of the LAT portion will be on the differences between day and night LAT and special considerations for night LAT in the target area.
10. Execution:
 - a. The PNSI will demonstrate flight environment assessment, proper flight control and chase positions for the various maneuvers.
 - b. Circuit 1:
 - (1) The PNSI will chase the MAWTS-1 instructor in the performance of the following maneuvers:
 - (a) Ridgeline crossings (beam / straight ahead)
 - (b) Level (NAV / hard / break) turns

c. Circuit 2:

- (1) The PNSI will lead a section LAT circuit performing the following maneuvers:
 - (a) Turns (night specific)
 - (b) Ridgeline crossing
 - (c) Section target attacks

d. Mission performance standards:

- (1) Able to maintain formation in the LAT environment
- (2) Knows the guideline for NVD use outlined in TACMAN Vol I
- (3) Executes successful target attack with a CEP of 25 meters or less
- (4) Adheres to tactical abort parameters

11. Debrief:

- a. The PNSI should thoroughly review the tactical phase of the flight emphasizing positioning and maneuvering throughout the runs. Special emphasis should be placed on problem areas encountered during the flight.
- b. As the evolution is recreated, learning points must be emphasized. The events that occurred need to be analyzed. The focus should be on the "what and why" of each learning point. Debrief the execution and, once analyzed, give solutions to the errors or suggest techniques that might improve the outcome of the event if it were to be flown again. In essence, this is the "I" part of the certification.
- c. VTR tapes should be reviewed for proper radar work as well as FLIR and NAVFLIR sensor usage. Be sure to emphasize delivery parameters and profiles ensuring proper employment of weapons and sensors as per the brief.

12. FA-18D Certification:

- a. Briefing responsibilities will be split. Generally, one PNSI will brief the admin. The pilot will brief the LAT specific portion of the brief and the WSO will brief target area tactics, sensor usage, etc.

RECERTIFICATION REQUIREMENTS

Refresher:

1. Aircrew previously certified as an NSI in the FA-18 returning to the FA-18 following more than 540 days out of model must complete an NSI re-certification

course. Upon re-certification by a MAWTS-1 instructor, the NSI designation may be made by the Commanding Officer. The following comprises the re-certification course:

- a. The PNSI shall meet all the prerequisites required for initial certification.
- b. The PNSI shall complete the formal academic syllabus.
- c. The PNSI shall complete an appropriate flight work-up syllabus as outlined by the squadron WTI.
- d. Aircrew assigned to a squadron with Lot XI or below aircraft shall fly the NSI-2 sortie per the guidelines.
- e. Aircrew assigned to a squadron with Lot XII or above aircraft shall fly the NSI-3 sortie per the guidelines.

Transition / Conversion:

- 1. Aircrew designated as an NSI in an aircraft other than the FA-18 who transition or undergo conversion to the FA-18, must complete the entire FA-18 NSI Certification Course.
- 2. Aircrew designated as an NSI High that are assigned to a squadron that is NS Low capable, must fly the NSI-3 sortie per the guidelines to be an NSI in that squadron.

FA-18 FORWARD AIR CONTROLLER (AIRBORNE) INSTRUCTOR (FAC(A)I) CERTIFICATION COURSE

Course Objective: To certify FA-18D aircrew as a Forward Air Controller (Airborne) Instructor capable of conducting ground and airborne instruction of the FAC(A) mission and capable of safely controlling CAS in close proximity to friendly troops. Emphasis will be placed on demonstration of ability to coordinate simultaneous FW & RW CAS, artillery, or NSFS, while working for a TACP and operating within a MACCS.

Length: IUT: 25 classroom hours and 8 sorties.

Cert: Closed book exam, FAC(A) Lecture presentation, and 3 sorties.

Notes:

1. The FA-18D FAC(A)I Certification Course is developed by MAWTS-1. Upon certification, the FAC(A)I designation may be made by the squadron Commanding Officer.
2. During the work-up, the FAC(A)I or squadron WTI will demonstrate flight planning and briefing techniques, fire support coordination techniques, target area tactics terminal control techniques and a FAC(A) escort utilization.
3. The PFAC(A)I must demonstrate the ability to brief, lead, and debrief FAC(A) supporting arms coordination techniques and escort techniques.

Prerequisites:

1. Designated naval aviator or naval flight officer.
2. CACC academic course complete.
3. FAC(A) qualified in accordance with MCO P3500.15.
4. Designated division lead. Experience level for WSOs should be equal to the pilot requirement to become a division lead.
5. Selected by the Commanding Officer.

IUT STAGE

IUT Academic Syllabus:

1. Self-Paced Readings:
 - a. MCWP 3-23 *Offensive Air Support*
 - b. MCWP 3-23.1 *Close Air Support*
 - c. MCWP 3-23.2 *Deep Air Support*

- d. MCWP 3-16.2 *Techniques and Procedures for Fire Support Coord.*
- e. MCWP 3-16.6 *Supporting Arms Observer, Spotter and Controller*
- f. Joint Pub 3-09.3 *JCAS*
- g. Joint Pub 3-09.1 *J-LASER*
- h. MCRP 3-23A *JAAT*
- i. MCRP 3-16B *J-FIRE*
- j. MCO P3500.14 *T&R Manual Volume I*
- k. MCO P3500.15B *FA-18 T&R Manual Volume II*
- l. *MAWTS-1 FAC(A) Handbook*

2. Lectures:

- a. The PFAC(A)I shall be capable of presenting any of these lectures during the certification phase. This must be completed within 60 days prior to the certification stage.

(1) FAC(A) Artillery Organization and Trend	FAC(A) ASP
(2) FAC(A) Call For Fire	FAC(A) ASP
(3) FAC(A) MACCS Part 1	FAC(A) ASP
(4) FAC(A) MACCS Part 2	FAC(A) ASP
(5) FAC(A) MAGTF FSCM	FAC(A) ASP
(6) FAC(A) NSFS Call For Fire	FAC(A) ASP
(7) FAC(A) NSFS Capabilities	FAC(A) ASP
(8) FAC(A) Targeting & Fire Support Planning	FAC(A) ASP
(9) FAC(A) Theater Air Ground System	FAC(A) ASP
(10) FAC(A) FA-18 Attack Helo Employment	FAC(A) ASP
(11) FAC(A) FA-18 Crew Coordination	FAC(A) ASP
(12) FAC(A) FA-18 Elevated Threat Employment	FAC(A) ASP
(13) FAC(A) FA-18 General Employment of FAC(A) & TAC(A)	FAC(A) ASP
(14) FAC(A) FA-18 Low Threat Employment	FAC(A) ASP
(15) FAC(A) FA-18 Night Employment	FAC(A) ASP
(16) FAC(A) FA-18 Planning and Preparation	FAC(A) ASP

3. Chalk Talks

- a. FA-18 Forward Air Controller (Airborne) Instructor Course
- b. FAC(A) lessons learned

IUT Flight Syllabus:

- 1. The squadron WTI shall conduct a work-up phase to prepare the aircrew for certification.
- 2. The work-up should prepare the crew to instruct day and night FAC(A) and fire

support coordination missions in low and elevated threats.

3. The sorties shall be evaluated by a FAC(A)I. Mission performance standards for the work-up sorties are per the T&R. The minimum suggested sorties are:
 - a. CACC 390-397

CERTIFICATION STAGE

Certification Academic Syllabus:

1. Closed Book Exam:
 - a. The written examination will be administered by a MAWTS-1 FAC(A)I. The exam will include fire support asset capabilities and fire support coordination principles. The minimum-passing grade for the exam is 85%. In the event of an exam failure, the certification will be terminated and **another attempt will not be allowed for at least one month.**
2. Lecture:
 - a. The MAWTS-1 FAC(A)I will pick a lecture for the PFAC(A)I to teach from the CACC syllabus as outlined in the Combat Qualification Academic Course.

Certification Flight Syllabus:

FAC(A)I 561 (2) FA-18Ds D (Night Optional)

Goal: Demonstrate proficiency of FAC(A) procedures in a low threat environment.

Requirements:

1. 2 FA-18D loaded / configured with:
 - a. Seven 2.75 inch or eight 5 inch WP rockets
 - b. 20 chaff and 40 flares
 - c. LTD/R
 - d. LDT
 - e. Mission recording system (CVRS preferred)
2. Two flights of CAS support aircraft
3. Indirect fire support assets (artillery, mortars or NSFS)
4. 1 TACP

5. Evaluated by a FAC(A)I
6. The PFAC(A)I shall demonstrate the ability to:
 - a. Brief, lead and debrief a FAC(A) mission and demonstrate to a MAWTS-1 FAC(A)I the capability to provide FAC(A) instruction.
 - b. Analyze the mission based on the GCE's mission objective, threat, weather, control measures, C3 network and CAS aircraft tactics.
 - c. Upon initial check-in, coordinate with a ground FAC for target locations, friendly positions, threat activity, surface fire support availability, terminal control responsibilities and restrictions.
 - d. Perform reconnaissance on two targets and prepare target briefs.
 - e. Request CAS via JTAR procedures through the MACCS.
 - f. Utilize standard JCAS briefing and control procedures to control at least two CAS attacks.
 - g. Utilize talk on method as appropriate to supplement the JCAS brief.
 - h. Coordinate or deliver a mark thirty seconds prior to TOT and provide accurate and timely corrections for attack aircraft.
 - i. Utilize LTD/R LASER for target marking as needed.
 - j. Coordinate appropriate SEAD as required against simulated threats.
 - k. Provide bomb damage assessment.
 - l. Utilize FAC(A) escort as needed for mutual support of suppression.

FAC(A)I 562 E (2) FA-18Ds D (Night Optional)

Goal: Demonstrate proficiency of FAC(A) procedures in an elevated threat environment.

Requirements:

1. 2 FA-18D loaded / configured with:
 - a. Seven 2.75 inch or eight 5 inch WP rockets
 - b. 20 chaff and 40 flares
 - c. LTD/R

- d. LDT
 - e. Mission recording system (CVRS preferred)
2. Two or more flights of FW and RW (if available) CAS aircraft
 3. Indirect fire support assets (artillery, mortars or NSFS)
 4. 1 TACP
 5. Evaluated by a MAWTS-1 FAC(A)I
 6. The PFAC(A)I shall demonstrate the ability to:
 - a. Brief, lead and debrief a FAC(A) mission and demonstrate to a MAWTS-1 FAC(A)I the capability to provide FAC(A) instruction.
 - b. Analyze the mission based on the GCE's mission objective, threat, weather, control measures, C3 network, and CAS aircraft tactics.
 - c. Upon initial check-in coordinate with a ground FAC for target locations, friendly positions, threat activity, surface fire support availability, terminal control responsibilities and restrictions.
 - d. Perform reconnaissance on two targets and prepare target briefs.
 - e. Request CAS via JTAR procedures through the MACCS.
 - f. Utilize standard JCAS briefing and control procedures.
 - g. Utilize talk on method as appropriate to supplement the JCAS brief.
 - h. Coordinate or deliver a mark thirty seconds prior to TOT and provide accurate and timely corrections for attack aircraft.
 - i. Utilize LTD/R LASER for target marking as needed.
 - j. Control at least two separate attacks utilizing simultaneous integration procedures. If available, these attacks should be combined FW & RW attacks.
 - k. Coordinate appropriate SEAD as required against simulated threats.
 - l. Provide bomb damage assessment.
 - m. Utilize FAC(A) escort as needed for mutual support of suppression.

Goal: Demonstrate proficiency of night FAC(A) procedures in a low or elevated threat environment.

Requirements:

1. 2 FA-18D loaded / configured with:
 - a. 4 LUU-2s (or illum rockets)
 - b. Seven 2.75 inch or eight 5 inch WP rockets
 - c. 20 chaff and 40 flares
 - d. LTD/R
 - e. LDT
 - f. Mission recording system (CVRS preferred)
2. Four to eight CAS aircraft (FW and RW)
3. Indirect fire support assets (artillery, mortars or NSFS) with illum rounds
4. 1 TACP
5. Evaluated by a MAWTS-1 FAC(A)I
6. The PFAC(A)I shall demonstrate the ability to:
 - a. Brief, lead and debrief a FAC(A) mission and demonstrate to a MAWTS-1 FAC(A)I the capability to provide FAC(A) instruction.
 - b. Analyze the mission based on the GCE's mission objective, threat, weather, control measures, C3 network, and CAS aircraft tactics.
 - c. Upon initial check-in coordinate with a ground FAC for target locations, friendly positions, threat activity, surface fire support availability, terminal control responsibilities and restrictions.
 - d. Perform reconnaissance on two targets and prepare target briefs.
 - e. Request CAS via JTAR procedures through the MACCS.
 - f. Utilize standard JCAS briefing and control procedures to control at least two CAS attacks.
 - g. Utilize talk on method as appropriate to supplement the JCAS brief.
 - h. Coordinate or deliver a mark thirty seconds prior to TOT and provide accurate

and timely corrections for attack aircraft.

- i. Utilize LTD/R LASER for target marking as needed.
- j. Coordinate target area illumination as required by CAS aircraft.
- k. Coordinate appropriate SEAD as required against simulated threats.
- l. Provide bomb damage assessment.
- m. Utilize FAC(A) escort as needed for mutual support of suppression.

RECERTIFICATION REQUIREMENTS

Refresher:

1. Previously certified FA-18 FAC(A)I aircrew returning to the FA-18 after more than 540 days out of model must complete a FAC(A) re-certification course. Upon re-certification by a MAWTS-1 instructor, the FAC(A)I designation may be made by the Commanding Officer. The following comprises the re-certification course:
 - a. The aircrew shall review the CACC course.
 - b. The aircrew shall complete the CACC-562 sortie evaluated by a MAWTS-1 FAC(A) instructor.

Transition / Conversion:

1. Aircrew designated as a FAC(A)I in an aircraft other than the FA-18D who transition or undergo conversion to the FA-18D, must complete the entire FA-18D FAC(A)I Certification Course.

FA-18 TACTICAL AIR COORDINATOR AIRBORNE INSTRUCTOR (TAC(A)I) CERTIFICATION COURSE

Course Objective: To certify an FA-18D aircrew as a Tactical Air Coordinator (Airborne) Instructor capable of conducting ground and airborne instruction of the TAC(A) mission. Emphasis is on the ability to coordinate with the GCE, coordinate mission assignments with the DASC and TACPs and airspace management.

Length: IUT: 3 classroom hours and 2 sorties.
Cert: Closed book exam and 1 sortie.

Notes:

1. The FA-18D TAC(A) Instructor Course is developed by MAWTS-1.
2. Upon certification, the TAC(A)I designation may be made by the squadron Commanding Officer.

Prerequisites:

1. Designated naval aviator or naval flight officer.
2. Certified as a FAC(A)I.
3. TAC(A) qualified in accordance with MCO P3500.15
4. Selected by the Commanding Officer.

IUT STAGE

IUT Academic Syllabus:

1. Self-Paced Readings:
 - a. The PTAC(A)I shall review all classes outlined in the CACC syllabus in the Combat Qualification Academic Course and be familiar with all of the reading listed in the FAC(A)I certification course.
2. Lectures:
 - a. FAC(A) FA-18 General Employment of FAC(A) **FAC(A) ASP**
& TAC(A)
 - b. FAC(A) FA-18 TAC(A) Employment **FAC(A) ASP**

3. Chalk Talks:

- a. FA-18 Tactical Air Coordinator (Airborne) Instructor Course
- b. TAC(A) lessons learned

IUT Flight Syllabus:

1. The squadron WTI shall conduct a work-up phase to prepare the aircrew for certification.
2. The work-up should prepare the crew to conduct TAC(A) missions in low and elevated threats.
3. The sorties shall be evaluated by a TAC(A)I. Mission performance standards for the work-up sorties are per the T&R. The minimum suggested sorties are:
 - a. CACC-398
 - b. CACC-399

CERTIFICATION STAGE

Certification Academic Syllabus:

1. Closed Book Exam:
 - a. A written examination will be administered by a MAWTS-1 TAC(A)I prior to the certification flight. The exam will include fire support asset capabilities and fire support coordination principles. The minimum-passing grade for the exam is 85%. In the event of an exam failure, the certification will be terminated and another attempt will not be allowed for at least one month.

Certification Flight Syllabus:

TAC(A)I 564 E (1) FA-18D D (Night Optional)

Goal: Demonstrate proficiency at TAC(A) in a MAGTF / combined operations scenario in an elevated threat.

Requirements:

1. Multiple terminal controllers
2. Two to four CAS aircraft
3. Indirect fire support assets (artillery, mortars or NSFS)
4. Evaluated by a MAWTS-1 TAC(A)I

5. The PTAC(A)I shall demonstrate the ability to:
 - a. Brief, lead and debrief a TAC(A) mission and demonstrate to a MAWTS-1 TAC(A)I the capability to provide TAC(A) instruction.
 - b. Perform coordination of terminal controllers, attack aircraft, and airspace management.
 - c. Receive a minimum of three targets from the FAC(A) and request and coordinate assets to destroy designated targets.
 - d. As airspace manager, coordinate the movement of helicopters in conjunction with attacking assets.
 - e. Prepare standard CAS briefs and assign to appropriate assets.
 - f. Pass EEs to the C3 system.
 - g. The PTAC(A)I must demonstrate proficiency in performing airspace management, coordinating up to three CAS sections simultaneously, and coordinating with a DASC and TACP in all threat environments.

RECERTIFICATION REQUIREMENTS

Refresher:

1. Previously certified FA-18 aircrew returning to the FA-18 after more than 540 days out of model must complete a TAC(A)I re-certification course. Upon re-certification by a MAWTS-1 instructor, the TAC(A)I designation can be made by the commanding officer. The following comprises the re-certification course:
 - a. The aircrew shall review the CACC course.
 - b. The aircrew shall complete the TAC(A)I-1 sortie evaluated by a MAWTS-1 TAC(A)I.

Transition / Conversion:

1. Aircrew designated as a TAC(A)I in an aircraft other than the FA-18D who transition or undergo conversion to the FA-18D, must complete the entire FA-18D TAC(A)I Certification Course.

FA-18A/C/D COMBAT READY AIRCREW TRAINING MATRIX

EVENT	DATE	INSTRUCTOR
NAVIGATION		
NAV 200		
NAV 201		
AERIAL REFUELING		
AR 202		
AR 203		
FIELD CARRIER LANDING PRACTICE / EXPEDITIONARY QUAL		
SFCLP/EQ 204		
FCLP/EQ 205		
FCLP/EQ 205		
ELECTRONIC WARFARE		
FA-18 SURFACE TO AIR		
SEW 206		
EW 206		
LOW ALTITUDE TACTICS		
LAT 1		
LAT 2		
LAT 3		
LAT 4		
SLAT 208		
LAT 208		
LAT 209		
AIR-TO-AIR		
BFM BASICS AND OFFENSIVE BFM		
DEFENSIVE BFM		
HIGH ASPECT BFM		
MULTI-PLANE-ENGAGED		
SAA 210		
AA 210		
AA 211		
AA 212		
AA 213		
AA 214		
AA 215		
AA 216		
AA 217		
AA 218		
AA 219		
AA 220		
AA 221		
AA 222		
AA 223		
AIR-TO-SURFACE		
FA-18 FUZING		
AS 230		
AS 231		
AS 232		
AS 233		
AS 234		
AS 235		
CLOSE AIR SUPPORT		
FA-18 CAS 1		
FA-18 CAS 2		
CAS 240		
CAS 241		
DEEP AIR SUPPORT		
ARMED RECONNAISSANCE		
FA-18 AIR TO GROUND		
DAS 250		
DAS 251		

NAME: _____

SSN: _____

FA-18A/C COMBAT QUALIFIED AIRCREW TRAINING MATRIX

EVENT	DATE	INSTRUCTOR
LOW ALTITUDE TACTICS		
LAT 308		
LAT 309		
AIR-TO-AIR		
FIGHTER MISSIONS		
MISSION EMPLOYMENT 1		
MISSION EMPLOYMENT 2		
MISSION EMPLOYMENT 3		
SAA 310		
AA 310		
AA 311		
AA 312		
AA 313		
AA 314		
AA 315		
AA 316		
AA 317		
AA 318		
AA 319		
AA 320		
AA 321		
AIR-TO-SURFACE		
SAS 330		
AS 330		
AS 331		
AS 332		
AS 333		
CLOSE AIR SUPPORT		
CAS 340		
CAS 341		
DEEP AIR SUPPORT		
SELF-ESCORT TACTICS		
DAS 350		
DAS 351		
DAS 352		
AERIAL SPECIFIC WEAPONS DELIVERY		
SASWD 360		
ASWD 360		
ASWD 361		
ASWD 362		
SURFACE SPECIFIC WEAPONS		
HARM HARDWARE AND SOFTWARE		
HARM MODES OF OP. AND DISPLAYS		
LASER MAVERICK		
IR MAVERICK		
PAVEWAY II WEAPONS		
SSSWD 370		
SSSWD 371		
SSSWD 374		
SSSWD 375		
SSWD 370		
SSWD 371		
SSWD 372		
SSWD 373		
SSWD 374		
SSWD 375		
SSWD 376		
NIGHT SYSTEMS		
NIGHT SYSTEMS TACTICAL CONSID.		
SNS 380		
SNS 381		

NS 380		
NS 381		
NS 382		
NS 383		
EVENT	DATE	INSTRUCTOR
NS 384		
NS 385		
NS 386		
NS 387		

NAME: _____

SSN: _____

FA-18D COMBAT QUALIFIED AIRCREW TRAINING MATRIX

EVENT	DATE	INSTRUCTOR
LOW ALTITUDE TACTICS		
LAT 308		
LAT 309		
AIR-TO-AIR		
FIGHTER MISSIONS		
MISSION EMPLOYMENT I		
MISSION EMPLOYMENT II		
SAA 310		
AA 310		
AA 311		
AA 312		
AA 313		
AA 314		
AA 315		
AA 316		
AA 317		
AA 318		
AA 319		
AA 320		
AA 321		
AIR-TO-SURFACE		
SAS 330		
AS 330		
AS 331		
AS 332		
AS 333		
CLOSE AIR SUPPORT		
CAS 340		
CAS 341		
DEEP AIR SUPPORT		
SELF-ESCORT TACTICS		
DAS 350		
DAS 351		
DAS 352		
AERIAL SPECIFIC WEAPONS DELIVERY		
SASWD 360		
ASWD 360		
ASWD 361		
ASWD 362		
SURFACE SPECIFIC WEAPONS DELIVERY		
HARM HARDWARE AND SOFTWARE		
HARM MODES OF OP. AND DISPLAYS		
LASER MAVERICK		
IR MAVERICK		
SSSWD 370		
SSSWD 371		
SSSWD 374		
SSSWD 375		
SSWD 370		
SSWD 371		
SSWD 372		
SSWD 373		
SSWD 374		
SSWD 375		
SSWD 376		
NIGHT SYSTEMS		
NIGHT SYSTEMS TACTICAL CONSID.		
SNS 380		
SNS 381		
NS 380		
NS 381		

EVENT	DATE	INSTRUCTOR
NS 382		
NS 383		
NS 384		
NS 385		
NS 386		
NS 387		
COMBAT ARMS COORDINATION AND CONTROL		
ARTILLERY ORG AND TRENDS		
CALL FOR FIRE		
MACCS I		
MACCS II		
MAGTF FSCMS		
MAGTF TARGETING		
NSFS		
TAGS		
FA-18 PLANNING AND PREPARATION		
FA-18 GEN. EMP. OF FAC(A)/TAC(A)		
FA-18 CREW COORDINATION		
FA-18 LOW THREAT EMPLOYMENT		
FA-18 ELEVATED THREAT		
FA-18 NIGHT EMPLOYMENT		
FA-18 ATTACK HELO EMPLOYMENT		
FA-18 TAC(A) EMPLOYMENT		
SCACC 390		
SCACC 391		
SCACC 392		
CACC 390		
CACC 391		
CACC 392		
CACC 393		
CACC 394		
CACC 395		
CACC 396		
CACC 397		
CACC 398		
CACC 399		

NAME: _____

SSN: _____

FA-18A/C/D FULL COMBAT QUALIFIED AIRCREW TRAINING MATRIX

<u>FA-18A/C FULL COMBAT QUALIFICATION</u>		
EVENT	DATE	INSTRUCTOR
CARRIER QUALIFICATION		
CQ 400		
CQ 401		
AIR-TO-AIR		
AA 410		
AA 411		
DEEP AIR SUPPORT		
ASSAULT SUPPORT ESCORT		
DAS 450		
DAS 451		
DAS 452		
DAS 453		
DAS 454		
DAS 455		
SURFACE SPECIFIC WEAPONS DELIVERY		
SLAM ER		
SSSWD 470		
SSSWD 471		
SSSWD 472		
SSSWD 473		
SSWD 470		
SSWD 471		
SSWD 472		
SSWD 473		
SSWD 474		

<u>FA-18D FULL COMBAT QUALIFICATION</u>		
AIR-TO-AIR		
AA 410		
AA 411		
DEEP AIR SUPPORT		
ASSAULT SUPPORT ESCORT		
DAS 450		
DAS 451		
DAS 452		
DAS 453		
DAS 454		
DAS 455		
SURFACE SPECIFIC WEAPONS		
SLAM ER		
SSSWD 470		
SSSWD 471		
SSSWD 472		
SSSWD 473		
SSWD 470		
SSWD 474		

<u>FA-18A/C/D SPECIAL SORTIE</u>		
EVENT	DATE	INSTRUCTOR
STRATEGIC AERIAL REFUELING		
AR 602		
SPECIFIC WEAPONS DELIVERY		
ASWD 660		
ASWD 661		
ASWD 662		
SSWD 670		
SSWD 671		
SSWD 672		
SSWD 673		
SSWD 674		
SSWD 675		
SSWD 676		
SSWD 677		
SSWD 678		
SSWD 679		
SSWD 680		
SSWD 681		
SSWD 683		

NAME: _____

SSN: _____

FA-18A/C/D FLIGHT LEAD QUALIFICATION TRAINING MATRIX

EVENT	DATE	INSTRUCTOR
COMBAT WINGMAN		
FA-18 SURFACE TO AIR		
LAT I		
LAT II		
LAT III		
LAT IV		
BFM BASICS AND OFFENSIVE BFM		
DEFENSIVE BFM		
HIGH ASPECT BFM		
FA-18 FUZING		
CAS 1		
CAS 2		
A/G EMPLOYMENT		
HARM HARDWARE AND SOFTWARE		
HARM MODES OF OP. AND DISPLAYS		
LASER MAVERICK		
IR MAVERICK		
NIGHT SYSTEMS TACTICAL CONSID.		
AIM-9		
AIM-7		
AIM-120		
A/A GUNNERY		
APG-65/73		
TACAIR PAVE WAY II WEAPONS		
FA-18 JSOW		
FA-18 JDAM		
SECTION LEAD		
FA-18 SURFACE TO AIR		
FA-18 EW SUITE		
TARGET ATTACK PLANNING		
CAS I		
CAS II		
JMEMS		
FIGHTER MISSIONS		
MISSION EMPLOYMENT I		
MISSION EMPLOYMENT II		
THREAT TACTICS		
THREAT AIRCRAFT		
SELF-ESCORT TACTICS		
HARM TAILORING		
HARM PLANNING		
ATTP		
DIVISION LEAD		
FA-18 SURFACE TO AIR		
A/G EMPLOYMENT		
SELF-ESCORT TACTICS		
DIVISION TARGETING / FLOW / O&DCA		
DIVISION TARGET AREA FLOW		
SEAD INTEGRATION		
MISSION COMMANDER		
STRIKE PLANNING		
FORCE CON / DEFENSE IN DEPTH		
JOINT SEAD INTEGRATION		
STRIKE MISSION BRIEFING		

NAME: _____

SSN: _____

FA-18A/C/D INSTRUCTOR TRAINING MATRIX

EVENT	DATE	INSTRUCTOR
<u>FA-18A/C/D INSTRUCTOR TRAINING SYLLABI</u>		
LOW ALTITUDE TACTICS INSTRUCTOR		
LAT 5		
FA-18 LATI COURSE		
FA-18 LAT STAN NOTES		
SLAT 508		
LAT 509		
LAT 510		
LAT 511		
AIR COMBAT TACTICS INSTRUCTOR		
FA-18 BRIEFING AND DEBRIEFING		
FA-18 BFM BASICS AND OFF. BFM		
DEFENSIVE BFM		
HIGH ASPECT BFM		
MULTI-PLANE ENGAGED		
A/A GUNNERY		
FIGHTER MISSIONS		
ATTP		
MISSION EMPLOYMENT 1		
MISSION EMPLOYMENT 2		
MISSION EMPLOYMENT 3		
APG-65/73		
AIM-9		
AIM-7		
AIM-120		
FA-18 EW SUITE		
THREAT TACTICS		
FA-18 ACTI COURSE		
FA-18 ACTI LESSONS LEARNED		
AA 571		
AA 572		
AA 573		
NIGHT SYSTEMS INSTRUCTOR		
NIGHT SYSTEMS TACTICAL CONSID.		
FA-18 NSI COURSE		
FA-18 NSI LESSONS LEARNED		
NS 500		
NS 501		
NS 502		
FORWARD AIR CONTROLLER AIRBORNE INSTRUCTOR		
ARTILLERY ORGANIZATION AND		
CALL FOR FIRE		
MACCS I		
MACCS II		
MAGTF FSCMS		
MAGTF TARGETING		
NSFS		
TAGS		
FA-18 PLANNING AND PREPARATION		
FA-18 GEN. EMP. OF FAC(A)/TAC(A)		
FA-18 FAC(A) CREW COORDINATION		
FA-18 LOW THREAT EMPLOYMENT		
FA-18 ELEVATED THREAT		
FA-18 NIGHT EMPLOYMENT		
FA-18 ATTACK HELO EMPLOYMENT		
FA-18 FAC(A)I COURSE		
FAC(A) LESSONS LEARNED		
CACC 561		
CACC 562		
CACC 563		

EVENT	DATE	INSTRUCTOR
TACTICAL AIR COORDINATOR AIRBORNE INSTRUCTOR		
FA-18 GEN. EMP. OF FAC(A)/TAC(A)		
FA-18 TAC(A) EMPLOYMENT		
FA-18 TAC(A)I COURSE		
TAC(A)I LESSONS LEARNED		
CACC 564		

NAME: _____

SSN: _____